

Attention: Dennis Carney
Charles Kleeman
Regional Response Center
Event: OPA Assessment

I. Situation (27 September 2004)

A. The Regional Response Center (RRC) was contacted by PADFP regarding the Tuscarora Oil Site located in Solebury Township, PA. The purpose of the call was to request assistance from EPA regarding an ongoing petroleum odor and potential release coming from the site. Historically, numerous spills had occurred approximately between 1915 and 1943. The call was referred to OSC Taurino for follow-up.

B. According to available file information, the Tuscarora Oil Site consist of the defunct Tuscarora Oil Company and the Limeport and Canal Creek Walk Developments. This area begins at the intersection of River Road (Route 32) and Ely Road and continues ½ mile south, adjacent to the Delaware River.

C. After reviewing the historical site file it was revealed that the site gained significant attention from EPA in the mid-1990's and was subject to a removal assessment. While odors of petroleum were noted at that time, no action under OPA was taken by the OSC then assigned since the no visible sheen of oil could be observed in a waterway. The OSC concluded in the last documented polrep that Site did not pose a substantial threat to a navigable waterway due to a discharge of oil. However, over the last decade EPA's Removal Program has continued to monitor the situation for potential action should a documented release to a waterway be established.

II. Actions Taken

A. On September 22, 2004, OSCs Taurino and Towle and Section Chief Charles Kleeman met with representatives from PADFP. The location of former tank farm at the corner Ely and River Roads was selected as the meeting point. A brief site history was discussed by OSC Towle who is most familiar with the site.

B. The representatives from PADP showed EPA areas were an orange substance was observed in a tributary that leads to the Delaware River a few weeks prior to the on-site meeting. While the orange substance was not observed during the site visit on September 22, 2004, a foamy substance was observed in the tributary near a seep from the embankment. In addition, a petroleum odor was also emanating from this location. It was determined that sample was to be taken from the unnamed tributary

C. The OSC contacted the Shell Corporation, a potential responsible party, and provided notification of the pending sampling to be conducted. A representative from Arcadis was sent and split samples were taken.

D. Samples were taken at two locations where seeps from the embankment were observed. The location of the foamy substance was selected as a sampling point and another downstream location.

E. IV. Cost Estimate:

Estimated Project Costs (as of 9/27/04)

ORGANIZATION	COSTS TO DATE	CEILING
START (Tetra Tech)	TBD	\$ 10,000
EPA	TBD	
USCG	TBD	
TOTAL	TBD	\$10,000

III. Future Actions

A. The OSC arranged for the samples to be analyzed by the USCG COIL laboratory in New Groton, Connecticut, and is awaiting the results.

Michael Taurino, OSC
Removal Response Section
Philadelphia, PA

POLREP 18 AND FINAL

Tuscarora Oil Site

Solebury Township

Bucks County, PA 18938

ATTN: RRC & C. Kleeman

I. SITUATION (as of 04 Jan. 99)

EVENT: End of Removal Assessment

A. Background - The Tuscarora Oil Site was the location of a petroleum storage facility active in the early parts of this century. The facility has been owned and operated by several entities over time. Several documented releases of petroleum products have occurred including the release of crude oil after several lightning strikes and the release of gasoline from an underground pipeline. These releases were documented before the advent of World War II; the gasoline spill resulted in the installation of a new water supply for several of the limited down gradient residences. After dismantling of the tanks and the passage of time, additional residential development occurred on and down gradient to the Site on land along the Delaware Canal and Delaware River.

B. Background - In late 1992, EPA became aware of citizen complaints of petroleum odor in area drinking water. Area drinking water is derived from the ground water. EPA collected samples and found that no levels of site-related organic compounds were detected in drinking water, but a petroleum-like odor was detected in drinking water and petroleum was detected in soil. With the assistance of specialized analytical testing and Exxon Corp. (a present day company with ties to past operations), EPA established that trace pollutants in ground water may derive from extremely weathered petroleum products from the general area of the storage tanks. Without agreeing to any responsibility, Exxon Corp. agreed to provide water filtration devices for several impacted residents and to conduct additional investigations of the source of weathered petroleum signatures in ground water. Exxon's studies confirm the above information.

C. Background - In 1994, EPA collected surface water samples from areas suspected to be impacted by the Site and found that surface waters at the Site posed no toxicity to tested organisms. Suspected impact areas were based upon anecdotal information and expected hydrologic regime.

D. Background - Beginning in 1993, EPA, EPA's technical advisory contractor (Weston), other federal officials, and representatives of Exxon Corp. or its contractors have visited the Site to look for or respond to alleged releases of oil to a navigable water. EPA has never found that the Site discharges oil to a navigable water, including the Delaware Canal, canal footer drains, Delaware river, or other surface waters in the vicinity of the Site. EPA conducted some inspections after rain

events to maximize the possible detection of oily material release. Residents have reported that some surface waters have a petroleum odor.

E. Background - All areas of former oil storage, now heavily vegetated, have been inspected by EPA. The last, previously owned by National Transit Company and in an area where a small amount of oil was found on the ground water table, was visited by the OSC on 10 Oct. 1997. Negligible amounts of oily material were noted in a small area of soil and no seeps or discharges were found.

F. Present Day - Pennzoil Corporation, another entity with past ties to site operation and/or ownership, has agreed to fund filter units at affected households until March 2003. The filters are periodically tested for performance. No calls or complaints have been received for a period of almost one year since the site was last inspected by EPA (09 Feb. 98) when no evidence of release was observed.

G. The OSC has confirmed that the site is not currently discharging oil to a navigable water and poses no threat of substantial discharge of oil to a navigable water. As such this site does not qualify for any response under the Oil Pollution Act of 1990 or its predecessor statutes.

H. Petroleum products are excluded from consideration for response under the Comprehensive Environmental Response Compensation and Liability Act of 1980 (Superfund).

II. ACTIONS AND FUTURE ACTIONS

A. The OSC has determined that the Tuscarora Oil Site does not qualify for response under the NCP, OPA or CERCLA. The site does not discharge oil or pose the substantial threat of discharge of oil to a navigable water (OPA) and does not include a hazardous substance source (CERCLA excludes petroleum from the definition of hazardous substance). Although petroleum contaminants have been detected in the ground water, OPA provides authority to respond only to discharges to navigable waters (which does not include ground water). No further action by the OSC is expected.

Mike Towle, OSC
US EPA - Region III
Philadelphia, PA 19103-2029

TUSCARORA OIL SITE

SOLEBURY TOWNSHIP, BUCKS COUNTY, PA. #18938
ATTN: Gregg Crystall, OERR

I. Situation: (1630 hours, 4-20-95)

A. On 4-19-95 OSC receives a citizen report of a possible oil sheen in the Delaware Canal adjacent to the defunct Tuscarora oil site area.

II. ACTIONS TAKEN:

A. On 4-20-95 the OSC and Sam Baughman, TAT meet at ELY & River Roads to investigate report. A walking investigation of the canal revealed naturally occurring algae in a small water surface area. No oil discharge or sheen was observed in the canal or the canal outfall into the Delaware River.

B. Upon completion of the inspection, both the OSC and TAT visited the township building and updated Mrs. Miller, Township Treasurer, and Councilman Brought on all current Site Assessment activities, and the results of the canal inspection for oil sheen.

III. FUTURE

A. OSC to continue to coordinate assessment efforts with Mr. Don Esch of Exxon Corp. and "Garaghty & Miller" representative Matthew Mulhall of the Langhorne, Pa. office.

Jack Owens, OSC
USEPA Region III
Philadelphia, PA

TUSCARORA OIL SITE ASSESSMENT

Solebury Township, Bucks County, Pa. 18938

Attn: Gregg Crystall, OERR

I. Situation:

- A. Site assessment continues at the Tuscarora Oil Site based on past and present analytical data.

II. Actions Taken:

- A. On 3-21-95 OSC's Owens and Towle, met with Exxon representatives at Geraghty & Miller offices in Langhorne, Pa. to review analytical data and to determine future scope of work.
- B. Todate, sampling data has not determined the source of local degraded drinking water.
- C. In April, Exxon will drill an additional four (4) monitoring wells to develop a more complete understanding of the hydrogeology in the vicinity of the site.
- D. Hydrocarbon finger print analysis of the subsurface rock (Lockatong formation) will also be performed to determine if naturally occurring hydrocarbons are impacting water quality.
- E. Present data indicates no impact to the waterways of the area is identifiable.

III. Future:

- A. EPA/Exxon to update impacted residents and local government officials on current assessment activities.
- B. EPA/Exxon to continue cooperative efforts in working towards common goals.

Jack Owens, OSC
US EPA Region III
Philadelphia, PA

POLREP 15

TUSCARORA OIL SITE

SOLEBURY TWP., BUCKS CO., PA 18938

ATTN: GREGG CRYSTAL AND DEBORAH DIETRICH
EVENT: REMOVAL SITE ASSESSMENT

I. SITUATION (AS OF SEPT. 07, 1994)

A. ON SEPTEMBER 7, 1994, EPA AND TAT MET WITH REPRESENTATIVES OF EXXON AND THEIR CONSULTANTS (GERAGHTY & MILLER) REGARDING THE RESULTS OF RECENT TESTING OF GROUND WATER IN THE LIMEPORT AREA. EXXON HAD DRILLED A DEEP WELL ON RESIDENTIAL PROPERTY IN LIMEPORT IN AN EFFORT TO EVALUATE THE DEPTH OF GROUND WATER CONTAMINATION AND THE POSSIBILITY OF DRILLING REPLACEMENT WELLS FOR AFFECTED RESIDENTS TO PROVIDE ODOR-FREE DRINKING WATER.

B. ANALYTICAL RESULTS FROM THE TEST WELL (WHICH IS CASED THROUGH THE SHALLOW AQUIFER TO MINIMIZE INFLOW OF LIKELY CONTAMINATED GROUND WATER) INDICATE THE PRESENCE OF LOW LEVELS OF ORGANIC COMPOUNDS (E.G., XYLENE), VERY LOW WELL YIELD, AND POOR WATER QUALITY. THE POOR WATER QUALITY IS LIKELY DUE TO THE EXTREME DEPTH OF THE WELL (1055 FEET). THE TEST WELL SUGGESTS THAT REPLACEMENT WELLS FOR THE RESIDENTS MAY NOT RESOLVE THE ISSUE OF POOR QUALITY DRINKING WATER.

C. THE SITE ASSESSMENT WILL THUS SHIFT FOCUS TO INVESTIGATE THE AREA NEAR THE POSSIBLE SOURCE(S) OF THE ODOR IN THE DRINKING WATER: FORMER PIPELINE LEAK AREA, FORMER OIL TANK AREA, AND/OR FORMER DEBRIS BURN PIT AREA. SEDIMENT, SOIL, AND WATER SAMPLING WILL BE COMPLETED TO CHARACTERIZE THE SOURCE AREA(S) AND WHETHER THESE SOURCE AREAS MAY HAVE IMPACTED AND CONTINUE TO IMPACT DRINKING WATER IN THE LIMEPORT AREA. EXXON CONTINUES TO VOLUNTARILY PROVIDE AND MAINTAIN CARBON FILTRATION UNITS FOR RESIDENTS WITH TRACE LEVELS OF UNKNOWN ORGANICS AND BAD ODOR IN THE GROUND WATER.

II. FUTURE ACTIVITIES

A. EPA OSC TO CONTINUE COORDINATION WITH EXXON TO CONTINUE ASSESSMENT OF GROUND WATER CONTAMINATION IN LIMEPORT AREA.

MIKE TOWLE, OSC
EPA REGION III
PHILADELPHIA, PA

14
POLREP #13
TUSCARORA OIL SITE
SOLEBURY TOWNSHIP
BUCKS COUNTY, PA 18938

I. SITUATION: 1600 HRS, FRIDAY, 05/27/94

- A. THE SITE HAS BEEN THE SCENE OF PAST PETROLEUM SPILLS BEFORE THE AREA WAS DEVELOPED FOR RESIDENTIAL USE.
- B. EXXON IS PRESENTLY PERFORMING A VOLUNTARY INTERIM INVESTIGATION.

II. ACTIONS TAKEN

- A. TAT PERFORMED A BIOASSAY TEST (CHRONIC-CERIODAPHNIA SP.) WHICH WILL DOCUMENT IF THE DISCHARGE IS TOXIC TO AQUATIC LIFE IN SMALL STREAM AND THE DELAWARE RIVER WHICH RECEIVES THE ON-GOING DISCHARGE.
- B. MAY 1994, EXXON'S CONTRACTOR, GERAHITY & MILLER, INSTALLED MONITORING/DRINKING WELL AT 1 HILLSIDE LANE. WELL AT APPROXIMATELY 170 FEET.

III. FUTURE ACTIONS

- A. CONTRACTOR TO CONTINUE TO DRILL WELLS TO BELOW CONTAMINATION LEVEL. APPROXIMATELY 500 FEET
- B. EPA TO DETERMINE FURTHER ACTIONS BASED UPON RESULTS FROM BIOASSAY TEST.

JACK OWENS, OSC
EPA REGION III
PHILADELPHIA, PA

EPA ELECTRONIC MAIL MESSAGE

Date: 24-Mar-1995 09:03am EDT
From: JACK OWENS
OWENS.JACK
Dept: (REG,03,ORAPM) (E)
Tel No: 215-597-1399

TO: GROUP RRC
TO: GROUP ERD-OERR
TO: JACK OWENS
TO: GROUP REGION03-TAT

(RRC)
(ERD-OERR)
(OWENS.JACK)
(REGION03-TAT)

Subject: POLREP #13 TUSCARORA

POLREP # 13

TUSCARORA OIL SITE ASSESSMENT

Solebury Township, Bucks County, Pa. 18938

Attn: Gregg Crystall, OERR

I. Situation:

A Site assessment continues at the Tuscarora Oil Site based on past and present analytical data.

II. Actions Taken:

A. On 3-21-95 OSC's Owens and Towle, met with Exxon representatives at Geraghty & Miller offices in Langhorne, Pa. to review analytical data and to determine future scope of work.

B. Today, sampling data has not determined the source of local degraded drinking water.

C. In April, Exxon will drill an additional four (4) monitoring wells to develop a more complete understanding of the hydrogeology in the vicinity of the site.

D. Hydrocarbon finger print analysis of the subsurface rock (Lockatong formation) will also be performed to determine if naturally occurring hydrocarbons are impacting water quality.

E. Present data indicates no impact to the waterways of the area is identifiable.

III. Future:

A. EPA/Exxon to update impacted residents and local government officials on current assessment activities.

B. EPA/Exxon to continue cooperative efforts in working towards common goals.

Jack Owens, OSC
USEPA Region III
Phila., Pa.

TO: GROUP RRC
TO: GROUP ERD-OERR
TO: GROUP REGION03-TAT
TO: GREGG CRYSTALL

(RRC)
(ERD-OERR)
(REGION03-TAT)
(CRYSTALL.GREGG)

POLREP # 13
TUSCARORA OIL SITE
SOLEBURY TOWNSHIP, BUCKS COUNTY, PA. #18938

ATTN: Gregg Crystall, Deborah Dietrich, Chris Thomas

I. Situation:

Summary: Defunct Oil Site. Current site assessment objectives are focused on developing a more complete understanding of the hydrogeology in the vicinity of the site and attendant concerns.

II. ACTIONS TAKEN:

A. On 4-1-94 the OSC, Dr. Brussack, a local resident and water quality specialist, and Doug Schiabe of Geraghty & Miller meet on site and conduct a walking tour along Ely Rd. and the Canal Area to observe newly discovered storm water pathway to the Delaware River. This pathway developed due to the excessive upgradient water drainage from recent storms. No oil discharge or sheen was observed discharging into the Delaware River.

B. OSC photographs water flow pathway to document event. Photographs will be shared with Geraghty & Miller the Remedial contractor hired by Exxon Corp.

C. In addition to the problem associated with sources of petroleum hydrocarbons in the site area, laboratory results for sulfides and sulfates will be reviewed to better understand the ground water conditions in the area.

D. On 4-7-94 TAT sampled two properties (Mize/Limeport residential area & Mc Cook/Phillips Mill residential area) to determine if recent elevated levels of lead in their drinking water is associated with well sediments or internal home piping. Both home owners have committed to purchase water filtration units to eliminate lead exposure by ingestion.

III. FUTURE ACTIONS

A. OSC to apprise OPA/OGA of significant site developments.

B. OSC to continue coordinate assessment efforts with "Geraghty & Miller" representative Matthew Muhiail of the Langhorne, Pa. office.

Jack Owens, OSC
USEPA Region III
Philadelphia, Pa.

63027

DUE TO THE WEATHERED PETROLEUM, STANDARD EPA TESTS TO QUANTITATE ALL PETROLEUM HYDROCARBONS WAS NOT POSSIBLE, AND THOSE THAT WERE DETECTED WERE PRESENT AT LEVELS TOO LOW TO PRESENT ANY HEALTH THREAT. SUBURBAN WATER COMPANY, OF BRYN MAWR, PA. AGREED TO PERFORM, AT NO COST, A NON-EPA APPROVED METHOD THAT THEY DEVELOPED TO IDENTIFY HYDROCARBONS IN DRINKING WATER. THE SAMPLES WERE ANALYZED BY FLAVOR PROFILE ANALYSIS (FPA), BY CLOSED-LOOP STRIPPING/THERMAL DESORPTION/GAS CHROMATOGRAPH/MASS SPECTROMETRY (CLSA/TDU/GC/MS) AND BY "SMELL CHROMATOGRAPH". THE RESULTS FROM THIS TESTING LEAD THE POTENTIALLY RESPONSIBLE PARTY (EXXON CORP.) TO VOLUNTARILY UNDERTAKE AN IN-DEPTH AREA GROUND WATER ASSESSMENT, WHICH WILL INCLUDE THE TIMEPORT, PHILLIPS MILL, AND CANAL WALK RESIDENTIAL AREAS. THE FOCUS OF THIS ASSESSMENT IS TO IDENTIFY THE VERTICAL AND HORIZONTAL EXTENT OF ANY GROUND WATER HYDROCARBON

A U.S. EPA SITE ASSESSMENT WAS INITIATED AS A RESULT OF CITIZEN COMPLAINTS OF PETROLEUM CONTAMINATION (TASTE/ODOR) IN THE AREAS RESIDENTIAL DRINKING WATER AQUIFER SYSTEM. A GROUND WATER INVESTIGATION BY LOCAL, COUNTY, OR STATE AGENCIES RESPONSIBLE FOR THE STUDY OR REGULATION OF PUBLIC WATER SUPPLIES HAS NOT FULLY ADDRESSED THE LOCAL DEGRADED DRINKING WATER ISSUE. IN 1988 PADER ISSUED AN ADVISORY TO ONE FAMILY REGARDING WATER USAGE. ALL RESIDENTS IN THE AREA DEPEND ON GROUND WATER FOR THEIR POTABLE WATER SUPPLY. THE OBJECTIVE OF THE CURRENT ASSESSMENT EFFORT IS TO VALIDATE AND IDENTIFY THE SOURCE OF HYDROCARBON CONTAMINATION DETECTED, BY USING SPECIFIC ANALYTICAL TECHNIQUES FOR WEATHERED PETROLEUM IN ORDER TO DETERMINE THE HYDROCARBON SPECIES PRESENT IN THE POTABLE WATER SUPPLY.

THE SITE HAS BEEN THE SCENE OF PAST PETROLEUM SPILLS BEFORE THE AREA WAS DEVELOPED FOR RESIDENTIAL USE. MUCH OF THE AVAILABLE INFORMATION DATES BACK FORTY TO FIFTY YEARS. APPROXIMATELY 250 FAMILIES LIVE IN THE SURROUNDING AREA, TWENTY OF THESE FAMILIES HAVE BEEN IDENTIFIED AS HAVING PETROLEUM DERIVED CONTAMINATED POTABLE WATER. PRIOR TO THIS ASSESSMENT EFFORT, ALL AFFECTED RESIDENTS PURCHASED WATER FILTRATION UNITS AT THEIR OWN EXPENSE. THE GROUNDWATER PATHWAY IS THE ROUTE OF MOST CONCERN, AND EXISTING DATA IS INADEQUATE TO EVALUATE THE SITES CONTRIBUTION TO THE DEGRADED POTABLE WATER SUPPLY.

ATTENTION: GREGG CRYSTALL AND DEBORAH DIETRICH
SUMMARY TO DATE:

POLREP #12
TUSCARORA OIL SITE
SOLEBURY TOWNSHIP
BUCKS COUNTY, PA 18938

TO: JACK OWENS
TO: GROUP RRC
TO: GROUP REGION03.TAT
TO: GROUP ERD/OERR
TO: GREGG CRYSTALL
(OWENS.JACK)
(RRC)
(REGION03.TAT)
(ERD/OERR)
(CRYSTALL.GREGG)

PLUME AND THE CONCENTRATIONS OF THE PLUME COMPONENTS IN THE LOCAL DRINKING WATER SUPPLY. ALTHOUGH EXXON IS PRESENTLY PERFORMING A VOLUNTARY INTERIM INVESTIGATION, THEY ARE NOT ACCEPTING RESPONSIBILITY FOR ANY CONTAMINATION AT THIS TIME AS OTHER POTENTIALLY RESPONSIBLE PARTIES, WHICH MAY INCLUDE THE "FEDERAL GOVERNMENT" HAVE OPERATED AT THE DEFUNCT OIL STORAGE AND PIPELINE TRANSMISSION FACILITY.

ALTHOUGH PETROLEUM CONTAMINANTS HAVE AFFECTED RESIDENTIAL DRINKING WATER WELLS, THE CWA, SECTION 311 ONLY PROVIDES EPA WITH THE AUTHORITIES TO RESPOND TO DISCHARGES TO THE NAVIGABLE (SURFACE) WATERS OF THE UNITED STATES; AND THE NCP SPECIFICALLY EXCLUDES PETROLEUM FROM ITS REMOVAL AUTHORITIES. THE NCP ONLY PROVIDES FOR THE ORGANIZATIONAL STRUCTURE AND PROCEDURES FOR PREPARING FOR AND RESPONDING TO DISCHARGES OF OIL AND HAZARDOUS SUBSTANCES.

DUE TO EPA'S LIMITED RESPONSE AUTHORITIES TO ADDRESS PETROLEUM IN GROUND WATER, CONGRESSMAN GREENWOOD INTENDS TO SPONSOR LEGISLATIVE CHANGES TO ALLOW EPA TO RESPOND TO PETROLEUM CONTAMINATION IN GROUND WATER. OSC OWENS HAS REFERRED MS. SUSAN COBB, THE CONGRESSMAN'S LEGISLATIVE DIRECTOR, TO MR. JOHN CUNNINGHAM, CHIEF OF THE OIL POLLUTION RESPONSE AND ABATEMENT SECTION IN HEADQUARTERS EMERGENCY RESPONSE DIVISION FOR TECHNICAL GUIDANCE.

EPA HAS ONLY ASSESSMENT AUTHORITIES IN THE PRESENT CIRCUMSTANCES, THE OSC, CONGRESSMAN GREENWOOD, AND EXXON'S REGIONAL DIRECTOR ALL AGREE THAT IT IS IN THE BEST INTEREST OF ALL PARTIES, FOR USEPA TO CONTINUE OVERSIGHT, AND TO COORDINATE PUBLIC AND GOVERNMENTAL AGENCY RELATIONS.

SPECIFIC AREAS OF AGREEMENT FOR CONTINUED EPA PRESENCE ARE:

- + TO IDENTIFY BOTH THE LATERAL AND VERTICAL EXTENT OF CONTAMINATION AND THE PRESENCE OF HYDROLOGIC BOUNDARIES.
- + TO CLEARLY IDENTIFY ALL RESPONSIBLE PARTIES.

- + PROVIDE EFFECTIVE CONTROL OVER SCOPE OF WORK REQUIRED BY ANY POTENTIALLY RESPONSIBLE PARTY.

- + MAINTAIN SPEEDY RESOLUTION OF ASSESSMENT ISSUES.

- + CONTINUE EFFECTIVE INTERFACE BETWEEN PARTIES IN SCHEDULING AND COMPLETING WORK ONCE UNDERWAY, AS THERE IS GREAT POTENTIAL FOR INCREASING THE SCOPE OF WORK AS NEW DATA IS GENERATED.

- + IDENTIFY POTENTIAL REMEDIAL OPTIONS.

- + DEVELOP CRITERIA FOR SCREENING OPTIONS.

- + SELECT RESPONSIBLE AND PRACTICAL SOLUTIONS.

MAJOR ASSESSMENT EVENTS

SITE AREA: 1- TUSCARORA OIL SITE

- 2- LIMEPORIT RESIDENTIAL AREA.
- 3- PHILLIPS MILL RESIDENTIAL AREA.
4. CANAL WALK RESIDENTIAL AREA.

JAN/FEB 93 : OSC STILLMAN INITIATES A REMOVAL ASSESSMENT. (13) WELLS SAMPLED FOR VOC'S, BNA'S. AREA MAP DEVELOPED.

MAR. APR 93 : (18) WELLS SAMPLED, (1) POND SAMPLE, (2) SEDIMENT. RESEARCH AREA WATER PROBLEMS.

MAY/JUN 93 : ON 6-14-93 OSC OWENS ASSUMES RESPONSIBILITY FOR SITE ASSESSMENT. OSC STILLMAN ON MEDICAL LEAVE. EXPANDED SITE ASSESSMENT AND CHANGE IN ANALYTICAL PROCEDURES AS PAST ANALYTICAL PROCEDURES FAILED TO IDENTIFY TPH. HYDROGEOLOGIC FLOW MAPS DEVELOPED. DOOR TO DOOR CANVASS BY TAT TO IDENTIFY RESIDENCES WITH FILTRATION UNITS OR BOTTLED WATER, AND GATHER WELL DATA. ASSESSED WETLANDS AND RIPARIAN DISCHARGE AREAS FOR OIL SEEPS. OSC COORDINATES WITH TOWNSHIP MANAGER, USCG, AND PA. FISH AND WILDLIFE, N.J. DEPT, OF ENVIRONMENT. (5) CANAL SAMPLES, (1) POND, (2) SEDIMENT (VOC'S, BNA'S, TIC, CLOSED LOOP TPH, AND FIELD TEST FOR PCB'S.)

JUL/AUG 93 :

EPA AND TAT MEET WITH EXXON ON-SITE. CONGRESSMAN GREENWOOD ON-SITE TO OBSERVE EPA RESIDENTIAL SAMPLING EVENT AND MEET WITH COMMUNITY. ABANDONED OIL TRANSMISSION MANIFOLDS LOCATED ALONG ELY RD. AND CANAL AREA. OSC ZENONE ON-SITE TO ADVISE ON "OPA" ISSUES. EPA/PA. FISH & WILDLIFE PERFORM 3-MILE RIVER AND CANAL OIL SEEP INSPECTION.

SEPT/OCT 93 :

EXXON AGREES TO PERFORM VOLUNTARY INTERIM INVESTIGATION. EPA, TAT AND EXXON MEET AT REGIONAL OFFICE TO FORMULATE RESPONSE ACTIONS. EPA MEETS WITH EXXON AT GERAUGHTY & MILLER OFFICES TO FINALIZE SAMPLING PROGRAM. EXXON SAMPLES (28) SELECT WELLS. (VOC'S, BNA'S, TOTAL LEAD, SULFIDES, SULFATES, AND FINGER PRINT SAMPLES.

EPA AND TAT HAS WORKING MEETING WITH EXXON TO REVIEW PERTINENT FINDINGS OF RECENT GROUNDWATER INVESTIGATION, AND TO PLAN THE SCOPE OF THE FUTURE WORK ENVISIONED TO BRING RELIEF TO THE AFFECTED RESIDENTS.

I. SITUATION (1700 HOURS, 2-8-94)

- A. EXXON CONTINUES VOLUNTARY INDEPENDENT SITE CHARACTERIZATION AND PLUME DELINEATION ACTIONS.
- B. PRELIMINARY LAB RESULTS FROM EXXON'S SAMPLING INDICATED SOME RESIDENTS WITH ELEVATED LEVELS OF LEAD. EXXON WILL CONDUCT FURTHER INVESTIGATION TO DETERMINE IF THE LEAD IS NATURALLY OCCURRING OR A RESULT OF LEAD SOLDERED PIPES. PREVIOUS EPA SAMPLING DID INDICATE LEAD IN THE SOLDER OF THE RESIDENTIAL PIPING. ADDITIONALLY, ELEVATED LEVELS OF METHANE WERE DETECTED IN SEVEN OF THE RESIDENTS HOMES. THESE RESULTS CORRESPOND TO ODOR COMPLAINTS IN THE DRINKING WATER. ALSO, UNIDENTIFIED ORGANIC COMPOUNDS WERE REVEALED IN SIX OF THESE SEVEN HOMES.
- C. EXXON REPRESENTATIVES EXPRESSED CONCERN FOR IDENTIFYING THE SOURCES OF CONTAMINATION AND THEIR WILLINGNESS TO REMEDIATE ANY CONTAMINATION ATTRIBUTED TO THEM.

II. FUTURE EVENTS

- A. FURTHER SITE INVESTIGATIONS INCLUDE: GROUNDWATER SAMPLING, DOWNHOLE TELEVISION CAMERA, THREE MONITORING WELLS TO BE INSTALLED FOR COMPARISON OF WATER QUALITY AND TO PROVIDE INFORMATION OF VERTICAL CONTAMINATION.
- B. CONGRESSMAN GREENWOOD MAINTAINS HIGH INTEREST IN SPONSORING OPA LEGISLATIVE AMENDMENTS TO ALLOW EPA TO RESPOND TO SITES WITH PETROLEUM GROUNDWATER CONTAMINATION.
- C. EPA WILL CONTINUE TO MONITOR EXXON'S EFFORTS TO INSURE EFFICIENT, APPROPRIATE AND TIMELY RESPONSE ACTIONS.
- D. PUBLIC OUTREACH EFFORTS AND INFORMATION TO CONTINUE.

JACK OWENS, OSC
U.S. EPA REGION III
PHILADELPHIA, PENNSYLVANIA

1. SITUATION:

The site has been the scene of past petroleum spills before the area was developed for residential use. Much of the available information dates back forty to fifty years. Approximately 250 families live in the surrounding area, twenty of these families have petroleum derived contaminated potable water. All impacted residents have purchased their own water filtration units. The groundwater pathway is the route of most concern, and existing data is inadequate to evaluate the sites contribution to degraded local potable water supplies.

Current site assessment objectives are:

- + To develop a more complete understanding of the hydrogeology in the vicinity of the site, including vertical ground water flow.
- + To further characterize the distribution of petroleum and other chemicals of concern in ground water.
- + Collect several rounds of water-level measurements from the existing local wells to more fully define the ground water flow regime near the site.
- + All sampling protocols, analytical methods, QA/QC procedures, and data evaluation will be performed in accordance with USEPA guidelines.

II. ACTIONS TAKEN:

- A. On 9-8-93 USEPA/Exxon meet at EPA Regional Offices to discuss scope of ground water assessment.
- B. On 9-8-93 Exxon enters into a verbal agreement with USEPA to voluntarily perform and develop in cooperation with USEPA an expanded and in-depth ground water assessment of areas of concern (Limport, Phillips Mill and Canal Walk residential areas. It is the finding of odor and taste of petroleum in a number of residential wells that has led to the need for this ground water investigation.

C. Expedited assessment actions are necessary to continue to delineate area of contamination and to ensure that any threat to public health by the presence of petroleum in home wells is addressed in a timely manner.

D. The potential responsible party (Exxon) has voluntarily undertaken water quality assessment work by hiring "Geraghty & Miller, Inc. Environmental Services to perform necessary actions. However, Exxon is not accepting responsibility for any contamination at this time as other potentially responsible parties, which include the "Federal Government" have operated in the area.

E. A sampling strategy to cover present considerations was agreed to at a 10-26-93 meeting between USEPA and Exxon at Geraghty & Miller Offices, in Langhorne, Pa.

Scope of Work and Topics discussed at this meeting were:

- Industrial Activities in Solebury Township vicinity.

+ Tuscorora Oil Operations
+ National Transit Oil Operations.
+ War Emergency Pipeline (now owned by Texas Eastern (Transmission Co.) - This pipeline currently runs directly through the newly developed Canal Walk Residential area - 300K/400K private homes.)
+ Tuscorora Oil spill history and response.
+ Exxon involvement in domestic well evaluation.

- Scope of Work for evaluating domestic water quality.

+ Location and number of water samples
+ Analytical procedures
+ Letters to home owners
+ Implementation schedule
+ Potential next steps

F. The Scope of Work was developed after reviewing information obtained from USEPA, PADER, USGS, Solebury Township, Bucks County Conservation Service, and the Mercer Museum. G&M, on behalf of Exxon, and in cooperation with the USEPA, will evaluate the drinking water quality of the area. This will include the synoptic collection of water quality and water-level measurements from domestic wells. Initially these samples will be obtained from 28 strategically located domestic wells.

G. The water samples collected for VOC's, BN's, total lead, tetra ethyl lead, sulfides and sulfates. In addition the samples will be submitted to "Worldwide Geosciences" of Houston, Texas to fingerprint the general nature and type of hydrocarbons present, if any, and to be analyzed specifically for hydrocarbon compounds in the C1 to C5 range.

H. The VOC and BN analytical data will be reviewed to evaluate the potential source of petroleum hydrocarbons, if any, detected in water samples. If gasoline constituents are detected in the water samples, the total lead and tetra ethyl lead data will be used to assess the type and potential source of lead, present in the ground water.

I. In addition to the problem associated with sources of petroleum hydrocarbons in the site area, the geologic and laboratory results for the sulfides and sulfate analysis will be reviewed to better understand the ground water conditions in the area.

G. As EPA has no authority to address petroleum in groundwater, and Exxon has acceded to EPA's request to perform a site investigation, procedural formalities will be kept to a minimum to eliminate the needless incurrence of costs for activities that serve no environmental purpose. Exxon has requested that USEPA remain the lead for this continued assessment effort.

H. A plan for Community Relations as a guidance mechanism for keeping local residents informed on assessment activities, and to provide opportunities for two-way communication on continuing activities has been jointly developed by USEPA/Exxon.

I. USEPA/Exxon both agree that the projected 12 weeks to complete the initial scope of work is an optimistic schedule and believe that this is the minimum time necessary to complete the proposed investigations and to properly evaluate the results.

FUTURE:

- A. OSC to apprise OPA/OGA of significant site developments.
- B. OSC to coordinate assessment efforts with "Garaghty & Miller" representative Matthew Mulhall of the Langhorne, Pa. office.

C. The implementation schedule for domestic well sampling:

- + Submittal of form letters to residents 1 week
- + Response from residents 3 "
- + Collection of water samples 2 "
- + Laboratory analysis 4 "
- + Report preparation 2 "

D. Test results from individual wells will be made available to participating homeowners at the conclusion of the study.

Jack Owens, OSC
USEPA Region III
Philadelphia, Pa.

TUSCARORA OIL SITE

SOLEBURY TOWNSHIP, BUCKS COUNTY, PA. #18938

ATTN: Gregg Crystal, Deborah Dietrich, Dan Ryan

1. SITUATION:

The site has been the scene of past petroleum spills before the area was developed for residential use. Much of the available information dates back forty to fifty years. Approximately 250 families live in the surrounding area, twenty of these families have petroleum derived contaminated potable water. All impacted residents have purchased their own water filtration units. The groundwater pathway is the route of most concern, and existing data is inadequate to evaluate the sites contribution to degraded local potable water supplies.

II. ACTIONS TAKEN:

A. On 9-8-93 EPA/Exxon meet at EPA Regional Offices to discuss additional assessment requirements.

B. Exxon enters into a verbal agreement with EPA to voluntarily perform an expanded and in-depth assessment of areas of concern (Limeport & Phillips Mill residential area, canal and site area).

C. Expedited assessment actions are necessary to continue to delineate area of contamination and to ensure that any threat to public health by the presence of petroleum in home wells is addressed in a timely manner.

D. The potential responsible party (Exxon) has voluntarily undertaken assessment work by hiring "Geraghty & Miller, Inc. Environmental Services to perform necessary actions. However, Exxon is not accepting any responsibility for any contamination at this time.

E. A sampling strategy to cover present considerations was discussed at the 9-8-93 meeting and is being developed. The need for field validated data is essential to predict possible remedial actions. All sampling to be coordinated by EPA.

F. Due to the possibility of other potentially responsible parties, Exxon has deferred the decision to take-over routine maintenance of privately owned residential water filtration units until all analytical data from new sampling can be evaluated.

G. As EPA has no authority to address petroleum in groundwater, and Exxon has acceded to EPA's request to perform a site investigation, procedural formalities will be kept to a minimum to eliminate the needless incurrence of costs for activities that serve no environmental purpose. Exxon has requested that USEPA remain the lead for this continued assessment effort.

H. A plan for Community Relations as a guidance mechanism for keeping local residents informed on assessment activities, and to provide opportunities for two-way communication on continuing activities is being jointly developed by EPA/Exxon.

FUTURE:

- A. OSC to apprise OPA/OGA of significant site developments.
- B. EPA/Exxon to meet week of 9/27/93 to finalize assessment plans. Future actions to be supplemented as analytical data is obtained.
- C. OSC to coordinate assessment efforts with "Garaghty & Miller" representative Matthew Mulhall of the Langhorne, Pa. office.

Jack Owens, OSC
USEPA Region III
Philadelphia, Pa.

TUSCARORA OIL SITESOLEBURY TOWNSHIP, BUCKS COUNTY, PA 18938

ATTN: GREGG CRYSTALL, DEBORAH DIETRICH, DAN RYAN

I. SITUATION:

A. A SITE ASSESSMENT CONTINUES AT TUSCARORA OIL SITE BASED ON PREVIOUS SAMPLING DATA. DOCUMENTING ANY WASTE TYPES AND QUANTITIES IS NECESSARY TO ASSESS THE POTENTIAL HAZARDS AND TO DETERMINE FUTURE SAMPLING EVENTS.

B. SAMPLING OF WATER AND SEDIMENT DURING FIVE PREVIOUS SAMPLING EVENTS HAS NOT REVEALED THE SOURCE OF THE DEGRADED DRINKING WATER QUALITY.

C. AT ONE TIME, 28 LARGE ABOVE-GROUND TANKS STOOD ALONG ELY ROAD NORTH OF LIMESPORT. OPERATED IN THE EARLY 1940S BY THE TUSCARORA OIL CO., A SINCE-DISSOLVED SUBSIDIARY OF EXXON CORP., IT WAS THE SITE OF SEVERAL SPILLS.

II. ACTIONS TAKEN:

A. ON 08/13/1993 OSC OWENS CONSULTED ON SITE WITH REGION III OIL COORDINATOR OSC ZENONE CONCERNING SITE ISSUES SURROUNDING OIA.

B. ON 08/13/1993 RESULTS RECEIVED OF THE SOIL SAMPLE WHICH WAS COLLECTED FROM THE BUCKS COUNTY CONSERVANCY PROPERTY WERE NEGATIVE FOR BOTH PCB'S AND BNA'S.

C. ON 08/18/1993 OSC OWENS, JAY AND WAYNE L. IMLER FROM THE PENNSYLVANIA FISHING COMMISSION INSPECTED THREE MILES OF THE SHORELINE ALONG THE DELAWARE RIVER, USING A FISH COMMISSION BOAT. OSC OWENS PERFORMED A SEEP INSPECTION OF THE CANAL. BOTH INSPECTIONS REVEALED NO VISIBLE CONTAMINATION IMPACTING SURFACE WATERS.

III. FUTURE:

A. OSC AWAITING TUSCARORA CLOSURE FILE SEARCH INFORMATION AND VOLUNTARY RESPONSE INTENT FROM EXXON CORPORATION.

B. COLLECTION AND EVALUATION OF SITE HISTORICAL AND SAMPLING DATA TO CONTINUE IN EFFORT TO DEFINE THE NATURE OF AREAS DEGRADED DRINKING WATER, OR CONTAMINANT RELEASE FROM THE SITE TO THE ENVIRONMENT.

C. EXXON TO PROVIDE EPA WITH RESULTS OF THEIR FILE SEARCH INFORMATION AND RESPONSE INTENT BY 8/30/93.

JACK OWENS, OSC

USEPA REGION III, PHILA PA

POLREP # 8
TUSCARORA OIL SITE
SOLEBURY TOWNSHIP, BUCKS COUNTY, PA 18938
ATTN: GREGG CRYSTALL, DEBORAH DIETRICH, DAN RYAN

I. SITUATION:

A SITE ASSESSMENT CONTINUES AT TUSCARORA OIL SITE BASED ON PREVIOUS SAMPLING DATA. DOCUMENTING ANY WASTE TYPES AND QUANTITIES IS NECESSARY TO ASSESS THE POTENTIAL HAZARDS AND TO DETERMINE FUTURE SAMPLING EVENTS.

SAMPLING OF WATER AND SEDIMENT DURING FOUR PREVIOUS SAMPLING EVENTS HAS NOT REVEALED THE SOURCE OF THE DEGRADED DRINKING WATER QUALITY.

AT ONE TIME, 28 LARGE ABOVE-GROUND TANKS STOOD ALONG ELY ROAD NORTH OF LIMESPORT. OPERATED IN THE EARLY 1940S BY THE TUSCARORA OIL CO., A SINCE-DISSOLVED SUBSIDIARY OF EXXON CORP., IT WAS THE SITE OF SEVERAL SPILLS.

II. ACTIONS TAKEN:

A. ON 07/20/1993 A LARGE VOLUME (CLOSED LOOP) WATER SAMPLE WAS COLLECTED FROM THE KEANE RESIDENCE DRINKING WATER SUPPLY. THE SAMPLE WAS DELIVERED TO THE PHILADELPHIA SUBURBAN WATER COMPANY FOR CLSADU GC/MS ANALYSIS. THE SAMPLE WAS ANALYZED AT NO COST TO EPA. ANALYSIS REVEALED OIL COMPOUNDS IN THE WATER.

B. ON 08/04/1993 OSC OWENS AND TAT OPENED THE ABANDONED MANIFOLD ON THE TUSCARORA PROPERTY AND USED THE ORGANIC VAPOR ANALYSER (OVA) TO DETECT ANY ORGANIC CHEMICAL VAPOR. OVA READING WAS 3 PPM. OSC OWENS AND TAT USED 30 FEET OF TUBING TO COLLECT A SAMPLE FROM THE MANIFOLD, BUT NOTHING COULD BE EXTRACTED.

III. FUTURE:

A. DUE TO LOW WATER LEVEL AND BOAT DRAFT, RECENTLY CANCELED RIVER OIL SEEP INVESTIGATION TO BE RESCHEDULED.

B. OSC AWAITING SITE CLOSURE FILE SEARCH INFORMATION AND RESPONSE INTENT FROM EXXON CORPORATION.

C. COLLECTION AND EVALUATION OF SITE HISTORICAL AND SAMPLING DATA TO CONTINUE IN EFFORT TO DEFINE THE NATURE OF AREA DEGRADED DRINKING WATER, OR CONTAMINANT RELEASE FROM THE SITE TO THE ENVIRONMENT.

D. EXXON TO PROVIDE EPA WITH RESULTS OF THEIR FILE SEARCH
INFORMATION.

JACK OWENS, OSC
USEPA REGION III
PHILADELPHIA, PA.

POLREP # 7
TUSCARORA OIL SITE
SOLEBURY TOWNSHIP, BUCKS COUNTY, PA 18938
ATTN: GREGG CRYSTALL, DEBORAH DIETRICH, DAN RYAN

I. SITUATION:

A SITE ASSESSMENT CONTINUES AT TUSCARORA OIL SITE BASED ON PREVIOUS SAMPLING DATA. DOCUMENTING ANY WASTE TYPES AND QUANTITIES IS NECESSARY TO ASSESS THE POTENTIAL HAZARDS AND TO DETERMINE FUTURE SAMPLING EVENTS.

SAMPLING OF WATER AND SEDIMENT DURING THREE PREVIOUS SAMPLING EVENTS HAS NOT REVEALED THE SOURCE OF THE DEGRADED DRINKING WATER QUALITY.

AT ONE TIME, 28 LARGE ABOVE-GROUND TANKS STOOD ALONG ELY ROAD NORTH OF LIMBERT. OPERATED IN THE EARLY 1940S BY THE TUSCARORA OIL CO., A SINCE-DISSOLVED SUBSIDIARY OF EXXON CORP., IT WAS THE SITE OF SEVERAL SPILLS.

II. ACTIONS TAKEN:

A. THE VOLATILE AND SEMIVOLATILE TENTATIVELY IDENTIFIED COMPOUND (TIC) ANALYSIS OF AN OILY WATER AND SLUDGE SAMPLE COLLECTED IN THE CANAL ON JUNE 25, 1993 REVEALED LOW LEVELS OF UNKNOWN HYDROCARBONS.

B. ON 07/20/1993 A LARGE VOLUME (CLOSED LOOP) WATER SAMPLE WAS COLLECTED FROM THE KEENE RESIDENCE DRINKING WATER SUPPLY. THE SAMPLE WAS DELIVERED TO THE PHILADELPHIA SUBURBAN WATER COMPANY FOR GC/MS ANALYSIS. THE SAMPLE IS BEING ANALYZED AT NO COST TO EPA AND IS EXPECTED IN 3 TO 4 DAYS.

C. TO DATE, SAMPLING HAS INCLUDED 31 WATER SAMPLES AND 3 SEDIMENT SAMPLES. EXCEPT FOR THE TIC SAMPLE NO-DETECTABLE LEVELS OF PETROLEUM COMPOUNDS WERE DETECTED.

D. ON 07/27/1993 OSC OWENS AND TAT SAMPLED ONE OFFSITE AREA. A POOLED LEACHATE (DARK BLACK) AREA WAS FOUND 40 FEET SOUTHEAST OF THE POND ON THE BUCKS COUNTY CONCESSION PROPERTY ON RIVER ROAD (PARCEL # 50-4). AN ABANDONED MANIFOLD WAS FOUND ON THE TUSCARORA PROPERTY. THE MANIFOLD WAS OPENED AND A STRONG ODOR OF PETROLEUM WAS DETECTED. A SAMPLE FROM THE MANIFOLD COULD NOT BE OBTAINED. THE SAMPLE (PARCEL 50-4) WILL BE ANALYZED FOR SEMIVOLATILES AND PCBs. THE RESULTS ARE EXPECTED ON AUGUST 12, 1993.

III. FUTURE:

A. DUE TO LOW WATER LEVEL AND BOAT DRAFT, RECENTLY CANCELED RIVER OIL SEEP INVESTIGATION TO BE RESCHEDULED.

B. OSC AWAITING SITE CLOSURE FILE SEARCH INFORMATION AND RESPONSE INTENT FROM EXXON CORPORATION.

C. COLLECTION AND EVALUATION OF SITE HISTORICAL AND SAMPLING DATA TO CONTINUE IN EFFORT TO DEFINE THE NATURE OF AREA DEGRADED DRINKING WATER, OR CONTAMINANT RELEASE FROM THE SITE TO THE ENVIRONMENT.

D. EXXON TO PROVIDE EPA WITH RESULTS OF THEIR FILE SEARCH INFORMATION.

E. INGROUND MANIFOLD ON THE TUSCORORA PROPERTY TO BE SAMPLED.

JACK OWENS, OSC
USEPA REGION III
PHILADELPHIA, PA.

POLREP # 6
TUSCARORA OIL SITE
SOLEBURY TOWNSHIP, BUCKS COUNTY, PA 18938
ATTN: GREGG CRYSTAL, DEBORAH DIETRICH, DAN RYAN

I. SITUATION:

AN EXPANDED SITE ASSESSMENT CONTINUES AT TUSCARORA OIL SITE TO CHARACTERIZE AND EVALUATE THE POTENTIAL RISKS ASSOCIATED WITH PAST UNREMEDIATED OIL RELEASES TO THE ENVIRONMENT.

AT ONE TIME, 28 LARGE ABOVE-GROUND TANKS STOOD ALONG ELY ROAD NORTH OF LIMESPORT. OPERATED IN THE EARLY 1940S BY THE TUSCARORA OIL CO., A SINCE-DISSOLVED SUBSIDIARY OF EXXON CORP., IT WAS THE SITE OF SEVERAL SPILLS.

II. ACTIONS TAKEN:

A. ON 07/18/1993, EPA CIVIL INVESTIGATOR RICHARDSON, OSC OWENS HAVE TELECONFERENCE WITH PAUL LIEBMAN, COUNSEL FOR EXXON. SITE MEETING ARRANGED FOR 07/21/1993.

B. ON 07/20/1993 PENNSYLVANIA CONGRESSMAN GREENWOOD ONSITE TO WITNESS WATER SAMPLING AT KEANE'S RESIDENCE, AND WALK SITE AREA. SCHEDULED RIVER OIL SEEP INSPECTION CANCELED DUE TO EXTREMELY LOW TIDE IMPACTING BOAT DRAFT. CONGRESSMAN GREENWOOD EXPRESSES SUPPORT TO THE EFFORTS FOR SOLVING THE DRINKING WATER PROBLEMS IN THE AREA.

C. KEANE'S RESIDENCE WATER SAMPLE TO BE ANALYZED BY PHILADELPHIA SUBURBAN WATER COMPANY FOR CLSATDU GC/MS.

D. ON 07/21/1993 OSC OWENS, TAT MAROUF MEET WITH EXXON COUNSEL PAUL LIEBMAN, DONALD ESCH, NEW JERSEY AREA MANAGER, AND R.B. HARLEY, TECHNICAL MANAGER, AT SITE. SITE WALKING TOUR CONDUCTED TO FAMILIARIZE EXXON OFFICIALS WITH EXISTING SITE AND NEIGHBORING CONDITIONS. OSC VERBALLY REQUESTS EXXON TO CONSIDER A VOLUNTARY RESPONSE AND TO ACCEPT EPA OVERSIGHT.

E. EXXON RECOGNIZES THE FACT THAT A PAST LARGE OIL SPILL HAS BEEN DOCUMENTED AND THAT TUSCARORA OIL COMPANY DID PROVIDE THIRTEEN HOMES WITH A WATER SUPPLY FROM A COMMON WELL.

F. EXXON TO PERFORM A FILE SEARCH FOR TUSCARORA OIL COMPANY CLOSURE AND DIAGRAM OF OIL PIPELINE PATHWAYS. EPA TO BE PROVIDED WITH GENERATED INFORMATION.

G. THE SITE AREA BASICALLY CONSISTS OF FOUR AREAS:

AREA 1: OLD OIL SITE
AREA 2: LIMESPORT RESIDENTIAL AREA
AREA 3: PHILLIPS MILL RESIDENTIAL AREA
AREA 4: SOLEBURY CANAL AND TOWPATH AREA

H. IT WAS AGREED THAT EXXON WOULD CONSIDER A RESPONSE ACTION, WHILE ADDITIONAL ASSESSMENT ACTIONS ARE GOING, AND ANALYTICAL DATA IS BEING GENERATED.

III. FUTURE:

A. AS SOON AS RESULTS ARE RECEIVED FROM RECENT SAMPLING, SAMPLING OF ADDITIONAL RESIDENCES IN THE VICINITY OF THE SITE WHICH WERE NOT INCLUDED IN PAST SAMPLING MAY BE NECESSARY IN THE ATTEMPT TO FURTHER DEFINE THE EXTENT AND DEGREE OF CONTAMINATION IN THE AQUIFER BELOW THE VICINITY OF THE SITE.

B. THE OSC WILL WORK WITH ENFORCEMENT/ORC ON PRP ISSUES. ASSESSMENT TO FURTHER DETERMINE WHETHER A CONTINUOUS RELEASE STILL MAY BE OCCURRING FROM POCKETS OF TRAPPED OIL.

C. EPA TO CONTINUE TO INFORM TOWNSHIP AND CONCERNED AUTHORITIES OF SITE ACTIVITIES.

D. EXXON TO PROVIDE EPA WITH RESULTS OF THEIR FILE SEARCH INFORMATION.

JACK OWENS, OSC
USEPA REGION III
PHILADELPHIA, PA.

SOLEBURY TOWNSHIP, BUCKS COUNTY, PA. #18938

ATTN: Gregg Crystal, Deborah Dietrich, Dan Ryan

1. SITUATION:

An expanded site assessment continues at Tuscorora Oil Site to characterize and evaluate the potential risks associated with past unremediated oil releases to the environment.

This information will build upon information collected/generated during the preliminary assessment started in May, 1993. The overall objective of the expanded site evaluation, is to gather data to document if the past unremediated oil leaks/spills are associated with the local degraded potable water quality.

This assessment will focus on soil, surface water, and groundwater pathways for petroleum products to impact the environment. The groundwater pathway is the route of most concern at this site. To date, existing data is inadequate to evaluate the sites contribution to degraded local potable water supplies. An important part of the investigation is to obtain a more accurate waste characteristics and contaminated soil quantities.

The former Tuscorora Oil Storage Facility (28 tanks - 100,000 barrels) is approximately 200 acres, and oblong in shape. One historical building (pump house) remains on what is known as the Conservatory Grounds on River Road. No other buildings or tanks exist. However, several private homes have been built on the former tank farm grounds. Six homes have drinking water filtration systems, one does not require a system.

The site lies within a mostly wooded area, with no industrial land use. The depth of any waste disposal is not known, however, a site survey is in progress. All storage tanks have been removed, but no information is presently available that any ground remediation was performed.

A groundwater investigation by local, county, or state agencies responsible for the study or regulation of public water supplies has never addressed the local poor water quality issue. All residents in the area depend on groundwater for their potable water.

II. ACTIONS TAKEN:

A. On 7-7-93 OSC Owens met with Lt. Scott Kuhaneck, U.S.C.G./MSO in Philadelphia concerning the potential for leachate seeps from the site to impact the "Delaware River".

B. TAT continued to collect "Historical Data", review hydrogeologic data, and perform selective sampling until Target Identification of Compound Analysis data from past sampling event is available.

C. On 7-7-93 OSC met with Mayor McGill, of New Hope Borough, in effort to gather additional site closure information, and updates Solebury Township Secretary-Treasurer MRS. Ruth Milnor on assessment activities.

D. On 7-8-93 TAT collected samples at 2 homes to determine source (home/well) of lead detected in past sampling event. A lead test performed on the solder of the drinking pipes at Mr. Block's home was positive. One home was sampled for volatile organic compounds and semi-volatile organic compounds. In addition, TAT continued to collect historical data from township records.

E. To date, TAT has canvassed local residences to identify the number of area residences that have drinking water filtration units in their homes. Fifty two homes were surveyed, 18 have filtration units, 34 do not.

III. FUTURE:

A. EPA/USCG to perform joint oil seep investigation along Delaware River shoreline due to citizen reports of petroleum odors in area. The USCG will supply a surveillance boat and inspection personnel for the joint EPA/USCG "Low Tide" riparian seep investigation of target area.

B. OSC to apprise OPA/OGA of any significant site developments.

C. Site walk and visual inspection of suspected contaminated areas to cautiously continue (lyme ticks).

D. As needed, additional water, soil, and sediment sampling to be performed to confirm or delineate the extent of any contamination, or to document that onsite accumulated waste materials are a waste source impacting groundwater quality.

E. The need for air sampling to be evaluated based on discovery of unknown materials exposed to the atmosphere and residential proximity to any discovered waste sources.

Jack Owens, OSC
US EPA Region III
Philadelphia, Pa.

TUSCARORA OIL

SOLEBURY TOWNSHIP, BUCKS COUNTY, PA. 18938

ATTN: GREGG CRYSTAL, STEPHEN LUFFIG, DAN RYAN

I. SITUATION: (1600 HOURS, JUNE 25, 1993)

SITE BACKGROUND:

ASSESSMENT BY ERCS CONTINUES AS THE POTABLE WATER SUPPLY OF A NUMBER OF SURROUNDING HOMES APPEAR TO BE CONTAMINATED WITH SMALL QUANTITIES OF PETROLEUM (COLOR/ODOR/TASTE) REQUIRING HOMEOWNERS TO INSTALL POINT OF ENTRY CARBON FILTRATION SYSTEMS. SYSTEMS COST FROM \$3,000 TO \$7,000 DEPENDING ON QUALITY OF DEGRADED WATER; A 4-MONTH RECHARGE SCHEDULE IS COMMON AND COSTS UP TO \$900 PER SERVICE.

SO FAR ERCS SAMPLING RESULTS FOR WATER QUALITY, SEDIMENT AND SOILS INDICATE THAT NO ORGANIC HAZARDOUS CONSTITUENTS EXCEED EPA REGION III RISKED-BASED CONCENTRATION LEVELS. HOWEVER, LEAD HAS BEEN DETECTED IN WATER SAMPLES AT OR ABOVE THE MCL OF 5 PPB.

LAND USE SURROUNDING THE SITE IS RESIDENTIAL, WITH A GENERALLY SPARSE POPULATION DENSITY, EXCEPT FOR THE "LIMEPORT COMMUNITY" OF NEW SINGLE HOMES. SEVERAL NEW SINGLE HOMES ARE UNDER CONSTRUCTION (RIVER WALK) SOUTH OF LIMEPORT WITH A PROJECTION OF 32 FAMILY UNITS WITH PRIVATE WELLS AND ONSITE SEPTIC SYSTEMS.

ERCS ASSESSMENT EFFORTS WILL BE DESIGNED TO IDENTIFY ANY POTABLE WATER CONTAMINATION IMPACTING LOCAL RESIDENTS, WITH NEW CONSTRUCTION AREAS OF PARTICULAR CONCERN.

THE "LIMEPORT COMMUNITY" CAN BE DESCRIBED AS RESIDENTIAL PROPERTIES IMPACTED BY AN UNDEFINED WATER CONTAMINATION PLUME. SOURCE INVESTIGATION CONTINUES, AS CLEAR POTENTIAL EXISTS FOR FURTHER DOWNGRADEMENT, INCREASED SIZE OF PLUME, AND MORE HOMES TO BE IMPACTED BY DEGRADED WATER.

II. ACTIONS TAKEN:

- A. OSC AND TAT CONTINUE TO MODIFY SAMPLING PLAN TO IDENTIFY THE SOURCE AND EXTENT OF ANY GROUNDWATER SAMPLING.
- B. EVALUATION OF MIGRATION PATHWAYS AND TARGETING OF RESIDENCES FOR FURTHER SAMPLING IS UNDER STUDY.
- C. ON 6-23-93, OSC OWENS MET WITH SOLEBURY TOWNSHIP ZONING & CODE OFFICER DUBOIS AND SECRETARY-TREASURER TO UPDATE TOWNSHIP OF EPA ACTIONS. ADDITIONALLY, OSC MET WITH LOCAL RESIDENT, MR. PETER BRUSSOCK, PHD, WATER QUALITY SPECIALIST. MR. BRUSSOCK IS CORRESPONDING WITH SENATOR SPECTOR AND CONGRESSMAN GREENWOOD CONCERNING "LIMEPORT."

D. OSC IN CONTACT WITH USCG, DOT-PIPELINE SAFETY DIVISION AND NJ DEPARTMENT OF ENVIRONMENT CONCERNING PAST TRANSMISSION LINE LEAKS AND EVENTS. TRANSMISSION LINE OF CONCERN IS OUT-OF-SERVICE AND ABANDONED.

E. ON 6-23-93, TAT BEGAN A DOOR-TO-DOOR INFORMATION GATHERING CAMPAIGN TO IDENTIFY HOMES WITH FILTRATION UNITS, BOTTLED WATER, OR NO SYSTEMS AT ALL IN THE "LIMEPORT COMMUNITY." THIS EFFORT SERVES A TWO-FOLD PURPOSE, TO COLLECT NEEDED WATER QUALITY DATA AND TO INSURE THE PUBLIC IS ADEQUATELY INFORMED OF EPA'S SITE ACTIONS.

F. ON 6-24-93, TAT OBTAINED WATER AND SOIL SAMPLES ALONG THE CANAL, APPROXIMATELY 0.3 MILES AND 0.1 MILES SOUTH OF ELY AND RIVER ROADS, RESPECTIVELY. SAMPLES WILL BE ANALYZED FOR VOLATILE AND SEMI-VOLATILE COMPOUNDS.

III. FUTURE PLANS

A. EXTENT OF CONTAMINATION SURVEY TO CONTINUE, PARTICULARLY, OFFSITE MIGRATION PATHWAYS, AS INSUFFICIENT SCIENTIFIC DATA EXISTS.

B. TECHNICAL REVIEW OF LOCAL DOCUMENTATION AND PAST SAMPLING DATA TO CONTINUE.

C. FUTURE SAMPLING ORDER TO BE DETERMINED BY PAST WATER QUALITY DATA.

D. A HYDROLOGICAL INVESTIGATION IS NECESSARY TO PROVIDE INFORMATION ON THE EXTENT OF DOWNGRADEMENT WATER QUALITY AND PRIME DIRECTION OF AQUIFER FLOW. WETLANDS AND RIPARIAN DISCHARGE AREAS WILL ALSO BE ASSESSED FOR PETROLEUM SEEPS.

E. CRUCIAL TO PROPER EVALUATION IF EPA'S FINE-TUNING OF ANALYTICAL PROCEDURES, THIS IS NECESSARY TO IDENTIFY "WEATHERED" PETROLEUM PRODUCTS IMPACTING THE POTABLE WATER SUPPLY.

F. FURTHER DOMESTIC AND MONITORING WELL SAMPLING AT MULTIPLE DEPTHS MAY BE REQUIRED TO PROVIDE INFORMATION ON VERTICAL DISTRIBUTION OF GROUNDWATER CONTAMINATION.

JACK OWENS, OSC
USEPA REGION III
PHILADELPHIA, PENNSYLVANIA

POLREP # 3

TUSCORORA OIL

SOLEBURY TOWNSHIP, BUCKS COUNTY, PA. 18938

ATTN: Gregg Crystal, Stephen Luftig, Dan Ryan

1. Situation: (1600 Hours, June 18, 1993)

SITE BACKGROUND:

The Tuscora Site is located in Solebury Township, Bucks County, Pennsylvania. The Site was used as an oil storage facility during the 1940's, reportedly to support the war effort.

The Tuscorora Oil Company had twenty-eight storage tanks with a holding capacity of 100,000 barrels, primarily

designed to hold petroleum. Another subsidiary, the National Transit Company had six storage tanks (80,000 barrel capacity) located on adjacent land. The facility's purpose was to

transport oil by underground pipe line from the oil fields in Western Pennsylvania to a refinery at Bayway, New Jersey. Sometimes in reverse, gasoline was pumped from Bayway through the facility to points west.

About 1938 a major oil leak occurred in the main pipeline which crossed under River Road, the canal, and the Delaware River. Since the leak went undiscovered for an unknown length of time, the subsoil was saturated with thousands of gallons of petroleum.

The water supply of a number of surrounding homes was contaminated. Tuscorora Oil had to drill a common well a mile above the leak area and pipe water to selected homes to remediate the drinking water problem in an area known as "Limeport". However, the system fell into disrepair and was abandoned.

Today, the old facility is only vacant ground with dense vegetation.

Presently, residents are concerned that the oil from the facilities past leaks is still in the ground in a half-mile stretch along the canal just North of New Hope.

A strong odor resembling petroleum persists on the canal near the spill site, but the odor is not confined to the canal; its also in the private well water of some "Limeport" residents. And they fear they are being exposed to cancer-causing contaminants.

In January 1993, the Emergency Response Section tested well water from 13 homes in the Limeport area. The results came back negative for petroleum contamination, and Alkanes. In April 1993, ERS conducted additional sampling; However, these results may be inaccurate due to sample holding times being exceeded.

Further, complicating sampling efforts to determine the extent of possible contamination in private wells, is that a number of homeowners are fearful that adverse publicity will damage their property values and have refused testing.

Today, EPA testing has not identified the chemicals that are causing the strong petroleum odor in the drinking water, or the identity of the reddish material that is clouding the water in the swall area adjacent to the canal.

A number of "Limeport" residences have installed large water filtration units in their basements due to the extremely poor drinking water quality. In 1986, the Bucks County Department of Health notified one resident not to consume his drinking water until a properly sized and maintained filter was installed in his home, as Diethyl Benzene was detected in his well water at 100 times the MCL.

Solebury Township has passed a zoning ordinance that regulates the quality of private well water for any new homes built in the township. The ordinance lists 17 substances and "Maximum Contaminant Limits" for those substances. Petroleum is not on the list. There are no county or state laws regulating the quality of private well water. The only requirement for private wells is to be at least 100 feet away from any sewage system or septic systems.

An extremely important issue may concern wetlands. If petroleum seeps are impacting the wetlands area, which is a county park, adjacent to the Delaware Canal State Park. The contamination would flow into the Delaware River.

II. ACTIONS TAKEN:

A. On June 14, 1993 site assessment responsibility was transferred to OSC Owens, as OSC Stillman is on extended sick leave.

B. On 4/6/93 an additional round of sampling was conducted along the Delaware Canal above New Hope, Pa. to determine if petroleum contamination was impacting the canal. Three home wells were sampled in the "Limeport" housing development near the site, five water surface, one pond, and two sediment samples were collected.

Sample results from 4/6/93:

Surface water indicates no VOC's or Alkanes at levels of concern. One sediment sample contained 15 ppb Xylene, 9.8 ppb Alkanes. Lead in drinking water wells was detected at 4.4 and 3 ug/L. A duplicate sample was detected at 7.3 ug/L. The Action Level for Lead is 15 ppb, the MCL is 5 ppb. Traces of TCE, 4-methyl-2-natanone, and Xylene were also indicated.

C. Local residents use groundwater for all consumption and non-consumption (cleaning, bathing, laundry) activities. Groundwater is the only source of potable water in the vicinity of the site.

D. Due to the sample holding times being exceeded for the three residences sampled on 4-6-93, the OSC has decided to resample these residences, as their water has a detectable petroleum odor, and the analytical results may be inaccurate.

E. The objective of all future resampling is to determine the extent, degree and origin of contamination affecting the residential water supply. Future sampling will also be designed to establish whether or not Lead found in previous samples is to be found in the groundwater aquifer, or if its emanating from the plumbing systems of the residences; and to fine tune sampling procedures to further "pinpoint" the source of the Lead concentrations found in previous testing at or above the MCL.

F. OSC and TAT held a planning session on 6/18/93 to complete decision making and to finalize actions necessary to identify and mitigate the threat to public health at this site.

III. FUTURE PLANS

A. Additional testing tentatively scheduled for late June 1993. Sampling to include water, air, and soil sampling in an effort to determine if new groundwater pumping patterns may be drawing the degraded water into new construction areas, and to identify the specific contaminants in the site area.

B. OSC to mail letters to residents sampled stating results of sample analysis.

C. High media interest by all local news agencies.

D. OSC to keep local governmental officials updated on assessment activities and results.

E. Based on analytical results, a PRP search will be pursued.

Jack Owens, OSC
USEPA REGION III

POLREP # 2
TUSCARORA OIL SITE
SOLEBURY, BUCKS COUNTY, PA 18938
ATTN: GREGG CRYSTAL, DEBORAH DIETRICH

I. SITUATION: (2020 HOURS, TUESDAY APRIL 6, 1993)

A. TUSCARORA OIL COMPANY WAS AN OIL STORAGE FACILITY
LOCATED AT THE CORNER OF ELY ROAD AND RIVER ROAD DURING
THE EARLY 1940'S.

B. BASED ON COMPLAINTS FROM RESIDENTS NEAR THE SITE
CONCERNING GROUNDWATER AND STREAM CONTAMINATION AN
INVESTIGATION WAS STARTED BY EPA. ON JANUARY 07, 1993,
OSC STILLMAN TASKED THE TECHNICAL ASSISTANCE TEAM (TAT)
TO PERFORM A SAMPLING ASSESSMENT OF THE RESIDENTIAL
WELL WATER FROM FIFTEEN RANDOMLY PICKED RESIDENCES
AROUND THE SITE. THE RESULTS OF THESE SAMPLES SHOW
THAT THE WELL WATER FROM THESE RESIDENCES IS FREE OF
VOLATILE ORGANIC COMPOUNDS AND OF BASE, NEUTRAL, AND
ACID EXTRACTABLE COMPOUNDS (B.N.A.). HOWEVER, SEVERAL
OF THE WELLS WERE NOTED BY THE SAMPLING TEAM TO HAVE
DISTINCT PETROLEUM ODORS. BASED ON THIS AND OTHER DATA
SUPPLIED TO EPA BY AREA RESIDENTS OSC SCHEDULED AN
ADDITIONAL SAMPLING ASSESSMENT TO DETERMINE THE
COMPOSITION OF CONTAMINATION
AFFECTED AREA WELLS.

C. ON APRIL 02, 1993, OSC STILLMAN TASKED TAT TO RETURN TO
THE THREE RESIDENCES IN THE NEW DEVELOPMENT NEAR
TUSCARORA OIL SITE TO PERFORM ADDITIONAL WELL SAMPLING,
AND TO COLLECT SEDIMENT SAMPLES FROM DIFFERENT LOCATIONS
DEPENDING ON THE PRESENCE OF VISUAL CONTAMINATION ALONG
THE DELAWARE CANAL IN NEW HOPE, PENNSYLVANIA. IN
ADDITION, OSC STILLMAN TASKED TAT TO USE ADDITIONAL
SAMPLING PROTOCOLS TO HELP DETERMINE THE NATURE OF ANY
PETROLEUM CONTAMINATION AT THE SITE.

II. ACTION TAKEN:

A. ON APRIL 6, 1993, OSC STILLMAN, AND TAT CONDUCTED AN
ASSESSMENT ALONG THE DELAWARE CANAL IN NEW HOPE,
PENNSYLVANIA. ACCOMPANYING EPA ON THE ASSESSMENT WAS AN
AREA RESIDENT, DR. PETER BRUSSOCK, WHO HAD REPORTED TO
EPA THE CONTAMINATION IN THE CANAL AND ADJACENT STREAMS.
THE STREAMS ARE TRIBUTARIES OF THE DELAWARE RIVER,
APPROXIMATELY ONE/TENTH OF A MILE FROM THE SITE.
SPECIFIC OIL ODORS AND BROWN/ORANGE SEEPS WERE DETECTED.
SHEENS WERE ALSO DETECTED, BUT MAY BE ATTRIBUTABLE TO
NATURAL PROCESSES.

TERRY STILLMAN, OSC
EPA REGION III
PHILADELPHIA, PA

A. OSC STILLMAN TO BASE FUTURE SITE ACTIONS ON WATER AND
SEDIMENT SAMPLE RESULTS.

III. FUTURE ACTION:

B. TAT SAMPLED THE WELLS OF THREE RESIDENCES IN THE NEW
DEVELOPMENT NEAR THE SITE. FIVE SURFACE WATER SAMPLES
WERE ALSO COLLECTED; FOUR FROM DIFFERENT LOCATIONS ALONG
THE EAST SIDE OF THE CANAL AND ONE FROM THE POND WHICH IS
LOCATED IN THE MIDDLE OF THE BUCKS COUNTY CONSERVANCY
PROPERTY. TWO SEDIMENT LOCATIONS AT THE EAST SIDE OF THE
CANAL WERE SAMPLED.

POLREP #1

TUSCARORA OIL SITE

SOLEBURY, BUCKS COUNTY, PA 18938

ATTN: GREGG CRYSTAL, DEBORAH DIETRICH

- I. SITUATION: (1600 HOURS, TUESDAY JANUARY 12, 1993)
- A. TUSCARORA OIL COMPANY WAS AN OIL STORAGE FACILITY LOCATED AT THE CORNER OF ELY ROAD AND RIVER ROAD DURING THE EARLY 1940'S.
- B. DUE TO COMPLAINTS FROM LOCAL RESIDENTS OF STRONG ODORS AND WATER CONTAMINATION, OSC STILLMAN TASKED TAT TO CONDUCT AN INITIAL SITE ASSESSMENT, SCHEDULED FOR JANUARY 04, 1993.
- C. FOLLOWING SITE ASSESSMENT, OSC STILLMAN TASKED TAT TO RESEARCH AREA WATER PROBLEMS AND TAKE REPRESENTATIVE WELL SAMPLES FROM HOMES CLOSEST TO THE ORIGINAL SITE TO THE NORTH, SOUTH, EAST, AND WEST.

II. ACTIONS TAKEN

- A. ON JANUARY 04, 1993, OSC STILLMAN, OSC MATLOCK, AND TAT CONDUCTED AN INITIAL SITE ASSESSMENT OF THE 14.43 ACRE SITE LOCATED AT ELY AND RIVER ROADS. NO OIL CONTAMINATION WAS VISIBLE AT GROUND LEVEL OR ALONG THE DELAWARE CANAL. NO ODORS SUGGESTING OIL CONTAMINATION WERE DETECTABLE. HOWEVER, EVIDENCE OF AN ABANDONED FACILITY WAS CONFIRMED.
- B. ON JANUARY 11 AND 12, 1993, TAT SAMPLED A TOTAL OF THIRTEEN (13) WELLS LOCATED NORTH, SOUTH, EAST, AND WEST OF ORIGINAL SITE, WITHIN A ONE-HALF MILE RADIUS.

III. FUTURE ACTIONS

- A. OSC STILLMAN TO BASE FUTURE SITE ACTIONS ON WATER SAMPLE RESULTS.

TERRY STILLMAN, OSC
EPA REGION III
PHILADELPHIA, PA